

# **JD Patton ATC students showcase renewable energy sources display at ground breaking ceremony for Kenton County middle school**

**JD Patton Area Technology Center instructors Tom Pitts and John Christiansen have been actively involved in teaching their students the technology behind wind generation, solar power, and geothermal heating and cooling over this past year. Because of their work in renewable energy sources, both teachers were asked to coordinate student led demonstrations as part of the Turkey Foot Middle School ground breaking ceremony. The festivities were held Thursday, May 29 on the school's campus.**



*Ground Breaking*

*Photo (l to r): Mr. Tom Arnzen, Turkey Foot Middle School principal; Mr. Mike Martin, Kenton Co. Board member; Mrs. Karen Collins, Kenton Co. School District Board of Education president; Tim Hanner, Kenton Co. superintendent; Trey Grayson, Secretary of State; and Senator Jack Westwood.*

**The Kenton County School District event hosted an array of local, regional and state dignitaries. A variety of middle and high school student demonstrations included geotechnical engineering, structural engineering, insulated concrete forms, geothermal heating and cooling, architectural design, renewable energy sources, energy efficiency and conservation, and green roof.**

Tom Cantwell, a junior in Pitts' electrical technology program, was interviewed for a local news station. He discussed the live action display and how it showed energy consumption differences between CFL and INCAN bulbs. Cantwell also provided visitors with a visible means of showing which bulb used more energy, as well as what he had learned in class, and how it tied in with the whole energy environment.

"I have received hands-on experience for practical purposes," said Cantwell. "This class has been beneficial because I am actually learning something in the field that I want to pursue in college – environmental engineering."



*Photo: Tom Cantwell during interview.*

*Cantwell is active in the area technology center's SkillsUSA student organization and will serve as the local chapter president during the 2008-09 school year.*



**"I am specifically interested in teaching my students the electrical technology behind renewable sources," said Pitts. "When they leave my program, I want them to be able to get a job in renewable or alternative energy fields. The concepts and hands-on learning that takes place in our classrooms are beneficial in creating the pathway for postsecondary education. Cincinnati State College learned that we were involved in teaching renewable and alternative energy curricula and contacted us to look at dual credit opportunities. We are out in front of the curve because of what we can offer."**

***Senator Jack Westwood:***

***"The exciting part of this whole endeavor is the fact that kids are learning while doing."***

***"They are benefiting the environment, their school and themselves because they are our future engineers, scientists, and environmental professionals."***

*(left to right): Senator Jack Westwood, Pitts, and OCTE deputy executive director Michael Kindred.*



**Christiansen and the students in his heating, ventilation and air conditioning class created a geothermal display. They answered questions regarding the installation of geothermal energy and offered clarification of the old versus the new way of heating and cooling.**



***Above: Matt Stulz and Josh Dorman, both juniors in Christiansen's class, were interviewed by Tim Moore, Kenton County School District Network Television host. They discussed geothermal heating and cooling concepts using equipment and a display created in class.***





*L to r: Christiansen, Karen Reagor, Kentucky NEED; and Pitts.*

**"We were pleased to be part of this historic event," said Christiansen. "I feel this is a great chance for my students to learn about new technology, promote what they have learned and get a chance to talk with professionals to understand what they could do in the future. Our whole country is talking about renewable energy sources and we are teaching the technical concepts to help them succeed."**

***Pitts:***

***"J.D. Patton ATC became a member of the Kentucky NEED Project over this past year. I used the Kentucky NEED curriculum for solar power, wind generation and hydro-electric generation.***

***"I want to be perfectly clear, Russell ATC electrical technology instructor Doug Keaton helped pave the way for Kentucky Tech to be involved in alternative energy sources.***

***"The new Turkey Foot Middle will be a zero consumption facility. What we are doing together is learning about the technology in wind generation and solar power as an effective way to lower costs in the school district. Our students will shadow professionals during installation of solar panels and wind generation equipment during construction of the new middle school.***

***"Over the 2008-09 school year, we are going to actually power the ATC's electrical technology lab and vending machines with solar and wind generation. This is a great way for our students to apply what they have learned in a real setting."***

The Kenton County school district has become a leader in the commonwealth in constructing high performance educational buildings. The new middle school will feature a green roof, daylight harvesting, geothermal heating and cooling, and solar panel and wind generated energy sources.

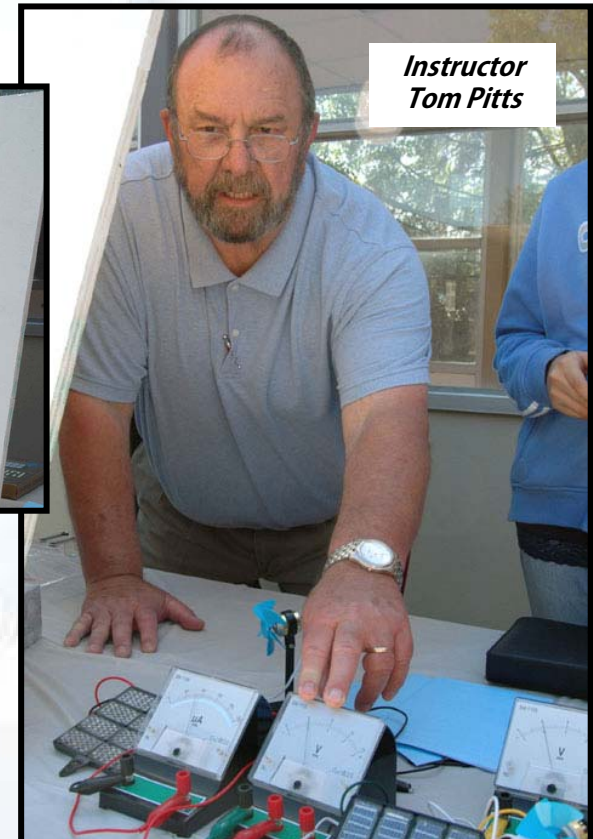
The area technology center is physically located between Caywood Elementary, an environmentally friendly school and the soon to be constructed energy wise middle school. Kentucky Tech faculty and staff look forward to the day when Kenton County officials can build a new area technology center using energy efficient construction, materials and renewable energy sources to power the facility.



*Geothermal heating and cooling*



*Above: INCAN vs CFL action display*





***According to Kenton County Superintendent Tim Hanner:***

***"We are not only breaking ground for a new building; we are breaking ground for a new generation of future leaders. Leaders who, in this decade, are being equipped each day with skills that will enable them to compete in tomorrow's world."***

***"The district's concept goes beyond the physical elements of our buildings. Our approach recognizes the urgent need to develop a future labor force capable of meeting the anticipated demand for 'green collar' jobs over the next twenty years."***

***"While we impact the minds of our students, we will in turn positively impact our environment and community."***

Good News Story #245

By: Fran Dundon

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Office of Career and Technical  
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Kentucky Education Cabinet



***Hanner and Kindred***